HEALTH AND SAFETY

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1.0 INTRODUCTION

1.1 Scope and Applicability of the Site Health and Safety Plan

This Health and Safety Plan (HASP) was prepared by the Nevada Division of Environmental Protection (NDEP) to support the environmental sampling component of the study entitled "Cross-Sectional Exposure Assessment of Case-Children With Leukemia (Acute Lymphocytic and Acute Myelocytic Leukemias) and A Reference Population in Churchill County, Nevada" as developed and conducted by the Center for Disease Control and Prevention (CDC) and the National Center for Environmental Health (NCEH). For the purposes of this HASP, the "site" shall include the field office located at 485 W. B Street in Fallon, Nevada and all private residences or public facilities within Churchill County which have been identified by the CDC as participants in the study or otherwise included as sites normally visited within the scope of work (i.e. State Health Dept. offices, Federal Express offices, hospital, etc.).

All personnel on site, including other agency staff and contractors and subcontractors, shall be informed of the site emergency response procedures and any potential fire, explosion, health, or safety hazards of the operation. All personnel who are included in sampling team efforts shall be required to review, comply with and sign the HASP prior to entering the site. Site personnel will be provided site-specific training based on a worker's potential for exposure and compliance with the requirements of 29 CFR 1910.120(e)(3) prior to commencement of work.

During development of this plan consideration was given to current safety standards as defined by EPA/OSHA/NIOSH, health effects and standards for known contaminants, and procedures designed to account for the potential for exposure to unknown substances. Specifically, the following reference sources have been consulted:

- OSHA 29 CFR 1910.120 and EPA 40 CFR 311
- U.S. EPA, OERR ERT Standard Operating Safety Guides
- NIOSH/OSHA/USCG/EPA Occupational Health and Safety Guide
- NDEP Health and Safety Plan, NDEP Inspector and Office Guidance and DCNR Emergency Plans and Procedures

1.2 Visitors

The site consists primarily of private residences and public facilities over which the NDEP has little control. No visitors are anticipated on the site during site sampling events, however, if a visitor does enter the site he/she will be required to comply with the provisions of the HASP, as directed by the sampling team leader. A site-specific briefing will be provided to all individuals who enter the site, including occupants of the individual residential sites. The site-specific briefing will provide information about site hazards, work zones, and other pertinent safety and health requirements as appropriate. In the event that a visitor does not adhere to the provisions of the HASP, he/she will be requested to leave the work area. All nonconformance incidents will be recorded in the site log.

2.0 ORGANIZATIONAL STRUCTURE

This chapter of the Health and Safety Plan describes lines of authority and communications as they pertain to health and safety functions at this site. The purpose of this chapter is to identify the personnel who impact the development and implementation of the site health and safety plan and to describe their roles and responsibilities. The organizational structure of this site's safety and health program is consistent with OSHA requirements in 29 CFR 1910.120(b)(2).

2.1 Key Project Personnel

The following personnel and organizations are critical to the planned activities at the site.

NDEP Project Officer:	Verne Rosse
NDEP Operational Team Coordinator:	Jim Najima
NDEP Envir. Sample Coordinator:	Jennifer Carr
NDEP Logistics Coordinator:	Jennifer Mc Martin
NDEP Health and Safety Officer:	Marcia Manley

2.2 Site Specific Health and Safety Personnel

The Site Health and Safety Officer (HSO) has responsibility for ensuring that the provisions of this HASP are adequate and implemented in the field. Changing field conditions may require decisions to be made concerning adequate protection programs. The HSO should be experienced and meet the

additional training requirements specified by OSHA in 29 CFR 1910.120. The HSO is responsible for conducting site inspections on a regular basis in order to ensure the effectiveness of this plan.

This document describes some of the hazards which sampling team members may be exposed to during the environmental site-sampling phase of the study. Protective measures are recommended for each of the identified hazards. These hazards and protective measures are only presented as guidelines. Each team leader and/or team member should evaluate the activities to be conducted to determine which hazards may be of concern at individual sites and whether the protective measures recommended here are adequate or appropriate. To address each sites' specific hazards and appropriate protective measures, a site safety plan should be completed by the team leader prior to entering the site or conducting sampling. Safety questions are incorporated in the daily log sheets provided to each team. The team leader should develop a site safety plan that is applicable to the particular site based on these questions and their observations.

2.3 Organizational Responsibility

The Nevada Division of Environmental Protection (NDEP): Marcia Manley, in the capacity as Health and Safety Officer (HSO), is responsible for overall safety oversight. NDEP will ensure that project plans meet OSHA requirements at a minimum, and that the health and safety of all site personnel is a primary concern. NDEP will have the lead in the Environmental Site Sampling in support of the CDC study; the CDC will have direct oversight of the project in conjunction with the ATSDR.

Individual team leaders are considered the site safety officers and are responsible for ensuring that site operations are carried out in accordance with the Site Specific HASP and for the proper operation, maintenance and preparation of tools, equipment and sampling containers used on the site and within site control. Team leaders are also responsible for ensuring that all personnel assigned to their team have received certification of health and safety training as required by this HASP and that all visitors are properly informed of safety issues and equipped if allowed to enter the Exclusion Zones. Should an accident or injury occur, the team leader(s) will be responsible for filing the appropriate worker's comp or incident/injury report forms and ensuring medical attention is provided if necessary.

3.0 TASK/OPERATION SAFETY AND HEALTH RISK ANALYSIS

3.1 Historical Overview of Site

See the Environmental Sampling Plan, Section 1.2 Background-Study History

3.2 Task-by-Task Risk Analysis

The evaluation of hazards is based upon site background information, anticipated risks posed by the specific sampling procedure, and normal working conditions inherent to office and inspector staff. The following sub-sections describe each task/operation in terms of the specific hazards associated with the activity and identify the protective measures to be implemented during completion of those operations.

3.3 Task Hazard Descriptions

- Cold exposure injuries, including frostbite, hypothermia and impaired ability to work are dangers when temperature and/or the wind-chill factor is low;

Hazard Prevention:
- Wear appropriate clothing, provide warm shelter area;
- Provide frequent rest periods;
- Monitor your own physical condition and that of others working on-site;
- Pack warm blankets and clothing in field gear.

- Heat stress is a substantial hazard, especially when suited in PPE, and is a concern during hot seasons. Heat stress occurs when there is an imbalance between the heat the body is producing during work and the heat it can get rid of through sweating to the environment. The same protective materials that shield the body from chemical exposure also limit the dissipation of body heat and moisture. Heat stress can impact the body very rapidly, within as little as 15 minutes of working. Early symptoms include heavy sweating, extreme weakness or fatigue, pale or flushed complexion, dizziness, nausea and headache.

Hazard Prevention:

- Acclimate to the heat through gradual workload buildup;

- During strenuous work or during the hottest part of the day, take frequent rest periods;
- Replace fluids frequently;
- Monitor employees frequently for symptoms of heat stress.

- Physical Hazards include hazards generally associated with general office and sampling such as lifting of heavy or awkward objects and slips and falls in unfamiliar sites. The field

office and individual sampling sites are unfamiliar to staff and due to confidentiality of site locale, per site planning is not possible. Additionally, the field office will be congested when all sampling teams are in the office and/or when packing and shipping activities are being conducted.

Hazard Prevention:

- Proper lifting (pre-lift weight assessment, use of legs, multiple personnel) techniques will prevent back strain;
- Location of First Aid equipment should be known (field office and each vehicle);
- Elevated awareness of slip, trips, falls, unstable ground, obstacles in yard or in house (toys, tools, boards with nails, etc.), possible overhead structures, heat/cold stress, cumbersome PPE when using sampling equipment, etc.;
- Cuts, scrapes and other minor injuries can be prevented by awareness of safe office equipment handling and by taking time to complete projects. If under a time constraint, assistance should be sought;
- The buddy system should be used at all times in the individual site locations;
- No hazardous materials or drum sampling will occur.

- Defensive Driving requires knowledge, alertness, foresight, judgment and skill in order to prevent incidents or injury. The Churchill County site is located approximately 79 miles from the NDEP office in Carson City. Although most roads to Fallon are well-traveled roads, there may be delays, aggressive drivers, etc. due to road construction. It is anticipated that the individual sampling sites could be located on unimproved roads involving traversing ditches and driving on dirt/gravel.

Hazard Prevention:

- Pre-trip planning and maps to individual sites;

- Alertness to conditions around you and the vehicle, including other vehicles, road conditions, children, animals, etc.;
- Knowledge of weather conditions and their influence on traction, visibility and vehicle control;
- Plan to stay overnight if working late and overly tired or have an alternate driver;
- Vehicle check lists for emergency and safety equipment.

- Biological Hazards would include contact with insects, black widow and other spiders,

snakes, unfriendly domestic animals and other indigenous pathogens.

Hazard Prevention:

- Wear closed shoes (no sandals, etc.) and PPE provided for sampling;
- Take care when lifting boards, cement blocks, rocks, shrubs and other materials under which insects or snakes could hide;
- If a known poisonous snake is observed, DO NOT HARASS IT.
- If a bite occurs from a snake, dog or poisonous insect, elevate the bite area and summon medical assistance;
- Avoid contact with rodents or areas where they habitat;
- Be aware of the location of domestic animals and if one is penned in the location of the sampling area, ask the owner to remove the animal until sampling is complete;
- Do not smoke, drink or eat while conducting sampling, packing and shipping, equipment preparation and decontamination. Always wash your hands upon leaving the sampling site and immediately following any procedure, which requires use of strong washing agents or chemicals. Wash hands thoroughly prior to smoking, drinking or eating to prevent the inadvertent ingestion of hazardous substances;
- Place all used PPE and garbage in trash bags until returning to the field office; dispose of trash bags in municipal trash bins at end of day.

3.4 Chemical Hazards Description:

Chemical hazards would include contact with sample preservatives, chemicals used for decontamination or cleaning of equipment, and/or contaminants of concern, which are generally grouped as metals, volatile organic compounds, semi-organic compounds, pesticides and polychlorinated biphenyls.

METALS, VOLATILE ORGANIC COMPOUNDS (VOCS), SEMI-VOLATILE ORGANIC COMPOUNDS (SVOVs), PESTICIDES, and POLYCHLORINATED BIPHENALS (PCBs): Analytes of these groups of contaminants will be tested for in the samples collected. The primary route of exposure for the chemical hazards of concern, which are based on contaminants linked to the occurrence of childhood leukemia or known to cause cancer, would be inhalation via dust generated during sampling, however, minor dermal contact may occur. Any exposure is not anticipated to be at a concentration that could cause any health or safety concern for the individuals exposed.

METHANOL: Also known as methyl alcohol, will be used in the decontamination of equipment, primarily the vacuum, hoses and vacuum head. Methanol will be mixed with water in order to enhance

evaporation when cleaning equipment. The routes of exposure would be inhalation or by dermal contact. Safety glasses should be worn and use should be in a well-ventilated area. See Appendix B, MSDS Sheets.

ALCONOX: General-purpose detergent. Route of entry would most likely be ingestion that could result in stomach distress. Dust mask may be used; gloves are useful. See Appendix B, MSDS Sheets.

NITRIC ACID: Weak solution will be used as a sample preservative for blank samples. May have strong odor; extremely corrosive. Safety glasses and gloves are required. See Appendix B, MSDS Sheets.

3.5 Equipment Operation and Maintenance

Summa canister: Pressurizing of Summa canisters should be performed in a well ventilated room, preferably under a fume hood, or in another well ventilated area such as outside in the equipment decontamination area.

Nilfisk vacuum: The vacuum and attachments may be awkward to carry and the terrain unfamiliar. Heightened awareness and caution should be taken. Proper PPE and precautions should be taken during decontamination procedures.

Soil sampling equipment and sample containers: The sampling areas will be unfamiliar to teams and heightened awareness and caution should be taken. Safe lifting practices should be implemented when lifting and carrying all field equipment. Sample containers should be handled with care, especially glass or other breakable containers. Handling of trip samples containing chemical preservatives should be minimized.

4.0 PERSONNEL TRAINING REQUIREMENTS

4.1 Pre-assignment or Initial Training

Pre-assignment or initial training requirements are based on a worker's potential for exposure and compliance with the requirements of 29 CFR 1910.120(e)(3). Site managers and team leaders who are directly responsible for or who supervise workers engaged in work activities shall receive additional supervisory training in compliance with 29 CFR 1910.120(e)(4). At a minimum all personnel entering the site are required to:

- Review the HASP and sign certification to comply.

- Receive training in recognition of the hazards on-site, the provisions of this HASP, and the responsible personnel. Site personnel will be provided site-specific training based on a worker's potential for exposure and compliance with the requirements of 29 CFR 1910.120 prior to commencement of work.
- Visitors will be provided site briefings and be required to comply with the provisions of the HASP as directed by responsible personnel.

- Pre-assignment and refresher training that meet the requirements under pre-assignment training, consistent with OSHA 29 CFR 1910.120 paragraph (e)(3). Documentation must be provided certifying that each site worker has received appropriate safety training and has read the NDEP Health and Safety Plan, including the Office and Inspector Field Guides and the DCNR Emergency Plans and Procedures.

4.2 Training Elements to be Covered for Site Workers:

The following items will be discussed by the HSO or by their assignee at a pre-assignment safety training or during periodic briefings or tailgate meetings:

- names of personnel and alternates responsible for site safety and health
- site characterization and safety, health and other hazards present on the site
- safe use of engineering controls and equipment on site
- work practices by which the employees can minimize the risks from hazards
- animal bites and stings

- chemical hazards
- emergency response plan
- overhead and underground utilities
- use of personnel protective equipment (PPE)
- physical hazards
- decontamination procedures detailed in the Standard Operating Plans
- symptoms of overexposure to hazards
- training requirements
- sanitation

4.3 Site-Specific Briefings for Visitors and Workers

All visitors shall remain outside the Exclusion Zone unless granted permission to enter the area by the

team leader. A site-specific or tailgate safety briefing is to be provided to all visitors and individuals who enter the site beyond the individual site entry point(s) and they will be required to sign a Site Entry Form before entering the Support Zone at any individual site. For visitors, the site-specific briefing provides information about site hazards, the site layout including work zones and places for congregation, the emergency notification system and evacuation procedures, and other pertinent safety and health requirements as appropriate. Visitors will not be allowed in the immediate sampling or Exclusion Area as defined in Section 7.3, Work Zone Definitions.

4.4 Training Certification

Employees and managers that receive and complete the necessary training and field experience are certified when they complete the necessary training and sign certification in agreement with compliance to the HASP. A written certificate is provided to each person completing the training. Any person who has not been so certified or who does not meet the requirements of equivalent training is prohibited from engaging in operations on the site.

5.0 PERSONAL PROTECTIVE EQUIPMENT TO BE USED

5.1 Level of Protection

Personnel Protective Equipment (PPE) necessary for utilization at the site has been identified as Level 'D.' This PPE should be worn during environmental sampling. The primary purpose of this level of protection is to ensure sample integrity. It provides minimum protection against chemical

hazards. If PPE must be upgraded due to particulates generated by site activities or if direct contact with skin-affecting substances may occur, the sampling team will leave the site and reevaluate the need to upgrade PPE. In some instances, nuisance-level dust masks may be utilized to prevent inhalation of excessive particulate or fumes from chemicals used in equipment decontamination or sample preservation. Gloves will be required for all sampling events, decontamination procedures and sample preparation activities.
The Level of Protection selected was based upon the following:

- Type and concentration of the chemical substance in the ambient atmosphere and its toxicity.
- Knowledge of chemicals on-site.

Level 'D' Personnel Protective Equipment includes the following:

- Tyvek coveralls or shirts and pants; and booties;
- Latex or nitrile gloves;
- Boots, canvas shoes or other footwear which completely cover the feet;
- Hard hat if overhead hazards exist;
- Safety glasses during decon operations or when adding preservatives to samples;
- Nuisance-level dust masks; and
- Hand-held radios for communications.

Preventing and minimizing contamination makes decontamination procedures following sampling events much easier. The following is a list of suggestions that may help reduce exposure to hazardous substances and contamination:

- Minimize contact with hazardous substances (e.g. do not walk through obviously contaminated areas, do not directly touch potentially hazardous substances or chemicals).
- Protect instruments or equipment with bagging. If necessary, make openings in the bags for sample ports and sensors that must make direct contact.
- Wear goggles to protect eyes if using chemicals that may splash onto face or into eyes. Wear nuisance-level dust masks when necessary.
- Identify and utilize work zones (equipment decontamination areas, office or paperwork areas, food storage areas separate from sampling equipment and samples, PPE suit-up areas). Do not enter the exclusion zone unless properly suited in PPE.
- Use all fasteners (buttons, zippers, snaps) on protective clothing.
- Gloves and boots should be tucked under the sleeves and legs of outer clothing, and if applicable, hoods should be worn outside the collar.
- Clothing junctures may need to be taped to prevent contaminants or chemicals from running inside the gloves, boots and jackets or into the sample containers.
- Check all PPE before use to ensure proper fit and there are no cuts or punctures.
- Take particular care to protect any injured areas of the skin such as cuts and scratches.

5.2 Respiratory Protection

Respiratory protection in general will not be necessary at the site as the potential for exposure is minimal. Nuisance-level dust masks will be made available should the team leader or individual

sampling team member determine that excessive dust may be generated during the sampling and that it would be in the best interest of health and safety to don the additional PPE.

6.0 MEDICAL REQUIREMENTS

6.1 Exposure/Injury/Medical Support

As a follow-up to an injury or possible exposure to chemicals used as sample preservative or during decontamination of equipment, all employees are entitled to and encouraged to seek medical attention and physical testing. It will be up to the employer to ensure employee is provided the testing and medical attention to accurately monitor for exposure effects. In cases involving visitors or personnel from other agencies, responsibility for obtaining medical attention shall rest with the team leader; follow-up treatment, reporting, and primary responsibility will be with their employer or medical insurance carrier.

6.3 Medical Surveillance

Medical surveillance is a regulatory requirement designed to ensure that the health of employees working on hazardous sites is, at a minimum, monitored and documented before, during and at termination of work on a site. The site as a whole, including the individual sampling sites which are

primarily private residences, are not hazardous sites and are not known to have hazardous substances at levels exceeding established health and safety criteria. For this reason, a baseline medical evaluation and periodic exams are not being required. The physiological condition of team members will be tracked by individual team leaders and members.

7.0 SITE CONTROL MEASURES

The following section defines measures and procedures for maintaining site control.

7.1 Buddy System

A buddy system requires at least two people who work as a team, each looking out for each other. A minimum of three to four employees will be assigned to each sampling team. Each team will have one team leader responsible for overall sampling activities and coordination. Team members should maintain visual contact whenever possible so they may observe each other for signs of exposure or

stress. Team members should inform the team leader of nonvisible effects of exposure as described in Section 3.

7.2 Site Communications Plan and Emergency Alert Procedures

Successful communications between field teams and contact with personnel in the field office is essential. The following communications systems will be available during activities at the Site.

- Voice communication
- Hand-held radios

Hand signals will not be necessary since the buddy system and line of sight will be maintained during sampling events.

Warning signals will be deployed in the event of an emergency. These will be voice, whistle and/or horn of vehicle.

7.3 Work Zone Definition

Two work zones will be established at the Site: the Exclusion Zone and the Support Zone.

The Exclusion Zone is defined as the area where environmental sampling is planned or is occurring, or because of activity, will provide a potential to cause harm to personnel. For the purposes of this plan, the Exclusion Zone will be the house and surrounding yard(s) and any areas where children are known to play or frequent. In the yard areas, the Exclusion Zone will be defined as within 20 feet of any area in which sampling is about to be or is being conducted. Entry into the Exclusion Zone requires the use of Level D PPE. The Exclusion Zone includes the individual sample sites, which are primarily private residences, and the equipment decontamination area.

The Support Zone is defined as the field office or area adjacent to field vehicles, which is outside of the Exclusion Zone.

Standing Orders for Exclusion Zone:

- No smoking, eating, or drinking in this zone.

- No horse play.
- No gum chewing.
- No matches or lighters in this zone.
- Check-in on entrance to the field office and maintain accountability on individual sites.
- Check-out on exit from the field office.
- Implement the communications system.
- Line of sight must be in position; primarily maintained by sampling team leader.
- Wear the appropriate level of protection.

7.4 Nearest Medical Assistance

Appendix B provides a map of the route to the nearest medical facility, which can provide emergency care for individuals who may experience an injury or exposure on-site. Directions to the hospital in the City of Fallon are included on maps provided in each field vehicle and as specified in a map on file in the field office. Also included on the maps themselves are emergency phone numbers as referenced in Section 9.5 below.

7.5 Exposure Monitoring and Air Sampling

There is no known potential for exposure to off-site migration of airborne hazardous substances, thus exposure monitoring and air sampling will not be conducted. Should excessive dust be generated during sampling, dust masks will be available for use to prevent inhalation of dust and dirt from the area.

8.0 DECONTAMINATION PLAN

Used PPE and disposable equipment will be bagged and placed in a municipal refuse dumpster after being rendered unusable. Decontamination fluids that will be generated will consist of deionized water, dilute nitric acid, water containing traces of methanol, residual contaminants and tap water with non-phosphate detergent (Alconox or equivalent). Since the fluids are expected to contain concentrations of contaminants below EPA health and human exposure levels, the decontamination fluids will be discarded to the municipal sewer.

The decontamination area is included in the Exclusion Zone. Appropriate Level "D" PPE is required

when conducting activities in this area, including dust masks, protective glasses and gloves when handling any chemicals.

9.0 EMERGENCY PROCEDURES

This section describes contingencies and emergency planning procedures to be implemented at the Site. This plan is compatible with local, state and federal disaster and emergency management plans as appropriate. While the HASP has been established to allow site operations to be conducted without adverse impacts to worker health and safety, these supplemental emergency response procedures have been developed to cover site contingencies.

9.1 General

All incidents shall be dealt with in a manner that protects the health and safety of site workers. In the event an incident occurs, the following procedure will be followed:

- A first aid kit shall be made available to the individual or appropriate initial action will be taken. The team leader shall be notified immediately and an incident/injury report filed with the HSO at the end of the day.

- If off-site assistance and medical treatment is required, the team leader shall notify the field office manager and proceed to the nearest emergency facility. If immediate medical assistance is required, the team leader shall be responsible for notifying the appropriate medical response facility or personnel.
- All team members are responsible for conducting themselves in a mature, calm manner in the event of an incident. All personnel must conduct themselves in a manner to avoid endangering themselves or others.

9.2 Pre-Emergency Planning

During the initial safety training and the site or tailgate safety briefings held prior to sampling activities, all employees will be trained in and reminded of provisions of this HASP, the NDEP Health and Safety Plan, the DCNR Emergency Response Plan, communication systems, and evacuation routes. The HASP will be reviewed and revised, if necessary, on a regular basis by the HSO. This will ensure that the plan is adequate and consistent with prevailing site conditions.

9.3 Personnel Roles and Lines of Authority

The HSO has primary responsibility for responding to and correcting emergency situations. Team

leaders will act under supervision of the HSO for safety issues and will be responsible for immediate safety decisions that have to be made in the field. This includes taking appropriate measures to ensure the safety of site personnel, daily tailgate or pre-assignment briefings, worker's comp forms (C-1s) and ensuring immediate medical attention is provided if necessary. Possible actions may involve evacuation of personnel from the site area if the team leader determines that the safety of those at the site are at risk, including the residents, visitors and employees. The HSO is additionally responsible for ensuring that corrective measures have been implemented, appropriate authorities notified, and follow-up reports completed.

9.4 Emergency Recognition/Prevention

Personnel will be familiar with techniques of hazard recognition from pre-assignment training or tailgate and site-specific briefings. The HSO is responsible for ensuring that prevention devices or equipment are available to personnel.

9.5 Evacuation Routes/Procedures

In the event of an emergency that necessitates evacuation of the site, the following alarm procedures will be implemented: The team leader will notify sampling team members by hand signals or verbal communications. All personnel should evacuate to a predetermined location identified off-site, usually the field office. Personnel will be expected to proceed to the closest exit with other sampling team members, be accounted for and mobilize to the safe distance area indicated in the HASP.

EMERGENCY RECOGNITION/CONTROL MEASURES

HAZARD	PREVENTION/CONTROL	LOCATION
Explosion/fire	Evac./RadioSystem	Evacuation Route
Spill	Berms/Dikes/Alarm System	Decon Area
Air Release	Ventilated area/face masks	Decon Area

9.6 Emergency Contact/Notification System

The following list provides names and telephone numbers for emergency contact personnel. In the event of a medical emergency, personnel will take direction from the HSO or the team leader and notify the appropriate emergency organization. In the event of a fire or spill, the site supervisor will

notify the appropriate local, state, and federal agencies.

Organization	Contact	Telephone
Ambulance	City of Fallon	911
Police:	City of Fallon	911
	Dispatch & Emer.	423-2111 or 911
Sheriff:	Dispatch or Emergency	423-3116 or 911
Hospital/Churchill Community Hospital		423-3151
Poison Control Center		415-476-6600
Washoe Poison Center		775-328-4129
National Response Center		800-424-8802
Center for Disease Control		404-488-4100

9.7 Emergency Medical Treatment Procedures

Any person who becomes ill or injured in the work zone must have the affected area washed down to the maximum extent possible. If the injury or illness is minor, first aid should be administered prior to transport. If the patient's condition is serious, first aid should be administered while awaiting an ambulance or paramedics. All injuries and illnesses must immediately be reported to the HSO.

Any person being transported to a clinic or hospital for treatment should take with them information on the chemical(s) they have been exposed to at the site. This information is included in Appendix B, MSDS Sheets.

9.8 Fire or Explosion

In the event of a fire or explosion, the local fire department should be summoned immediately. Upon their arrival, the HSO or designated alternate will advise the fire commander of the location, nature, and identification of the known hazardous materials involved or on-site.

9.9 Spill or Leaks

In the event of a spill or a leak, site personnel will:

- Inform their team leader immediately;
- Locate the source of the spillage and stop the flow if it can be done safely;
- Call local authorities if reportable; and,
- Remediate the spill as appropriate.

9.10 Emergency Equipment/Facilities

A specific list of equipment for the field vehicles is provided as Appendix C. The team leader shall be responsible for ensuring the equipment is available and in good repair. In general, the following emergency equipment will be located in the each team vehicle:

- First aid kit
- Fire extinguisher
- Eye wash
- PPE

- Distilled water
- Face or dust masks

9.10 Confined Space

A confined space is defined as any location that has limited openings for entry and egress, is not intended for continuous employee occupancy, and is so enclosed that natural ventilation may not reduce air contaminants to level below threshold limit value. Examples of confined spaces include: manholes, pipes, storage tanks, pits, sumps and bins. There are no known confined spaces at the site. Should a confined space be identified, entry is prohibited.

10.0 SPILL CONTAINMENT PROGRAM

The procedures defined below comprise the spill containment program in place for activities at the Site.

- Spill containment berms/dikes will be constructed only if it can be done a safe distance from contaminants, and local agencies will be contacted if reportable or assistance is required for remediation.

11.0 HAZARD COMMUNICATION

In order to comply with 29 CFR 1910.1200, Hazard Communication, the following Hazard

Communication Program has been established. All personnel will be briefed on this program, attend a health and safety orientation and be provided with written copy for review.

A. Container Labeling

All containers used in sampling on site will be inspected to ensure the following: (1) all containers will be clearly labeled as to the contents; (2) the appropriate hazard warnings will be noted; and (3) the name and address of the manufacturer will be listed. All secondary containers will be labeled with either an extra copy of the original manufacturer's label or with generic labels that have a block for identify and blocks for the hazard warning.

B. Employee Training and Information

Prior to starting work each employee will receive information and training on the following: (1) an overview of the requirements contained in the Hazard Communication Standard, 29 CFR 1910.1200; (2) chemicals present in the workplace operations; (3) location and availability of written hazard program; (4) physical and health effects from the hazardous chemicals; (5) methods and observation techniques used to determine the presence or release of hazardous chemicals; (6) how to lessen or prevent exposure to hazardous chemicals through usage of control/work practices use of PPE; (7) emergency procedures to follow if exposed to these chemicals; (8) how to read labels to obtain hazard information.

12.0 SANITATION

Trash shall be contained in plastic trash bags until the end of the day and then be disposed of in the trash receptacles provided outside the field office. Any liquid waste shall be disposed of to the municipal sewer system via the sinks, etc. in the field office.

LIST OF ACRONYMS and ABBREVIATIONS

ANSI	American National Standards Institute
ATSDR	Agency for Toxic Substances and Disease Registry
BHPS	Bureau of Health Protection Services, Nevada
CDC	Centers for Disease Control, U.S.
CFR	Code of Federal Register
DCNR	Department of Conservation and Natural Resources, Nevada
EZ	Exclusion Zone
FR	Federal Register
HASP	Health and Safety Plan
NCEH	National Center for Environmental Health, Center for Disease Control
NDEP	Nevada Division of Environmental Protection
NIOSH	National Industry Occupational Safety and Health
OSHA	Occupational Safety and Health Agency, U.S.
PPE	Personal protective equipment; Level “D” required
USGS	U.S. Geological Survey

SELECTED DFINITIONS

Exclusion Zone means the area where sampling will occur or within the yard or perimeters of an individual site or the decontamination area.
Health and Safety Officer (HSO) means the individual responsible for the health safety plan implementation and overall project health and safety issues.

Project means the environmental sampling component of the CDC/NCEH study entitled, "Cross-Sectional Expose Assessment of Case-Children With Leukemia (Acute Lymphocytic and Acute Myelocytic Leukemias) and a Reference Population in Churchill County, Nevada."

Sampling Area means the area in which dust or soil samples are to be taken and the immediate space surrounding all personnel involved in the sampling activities.

Site means the field office located at 485 W. B Street, Fallon, Nevada and all private residences or public facilities in Churchill County, Nevada which have been identified by the CDC as participants in the study or otherwise as sites normally visited within the scope of work (i.e. State Health Dept. Offices, Federal Express offices, hospital, etc.).

Support Zone means the field office of areas outside the Exclusion Zone, including the area adjacent the field vehicles when parked at individual sites.

Tail-gate Meeting means a pre-assignment briefing by sampling teams, either as a group or as individual teams, prior to leaving the field office or Support Zone on any given day.

Team Leader means the person designated as responsible for sampling team oversight.

Visitors means all persons who are not immediate family members (mother, father, children) living in an individual residence or are not members of the sampling teams.

APPENDIX A---MSDS SHEETS

APPENDIX B – MAP OF ROUTE TO NEAREST MEDICAL FACILITY

APPENDIX C
EQUIPMENT CHECKLIST
FOR FIELD VEHICLE

1. First Aid Kit
2. 1 Gallon Water
3. 1 Dozen Individual Hand Wipes (Towelettes)
4. Shovel (s)
5. 2 Lb. B-C Fire Extinguisher
6. NIOSH Pocket Guide to Chemical Hazards
7. Leather Gloves
8. Plastic Drinking Cups
9. 1 Roll Paper Towels
10. 1 Roll Duct Tape
11. Flashlight(s) with Batteries
12. 1 Bronze Non-Sparking Bung Wrench
13. Spare Tire Inflated to Proper Pressure
14. Tools Necessary to Change Tire (jack, lug wrench, etc.)
15. 6-30 Minute Road Flares
16. 1 Pair 12' Jumper Cables
17. CPR & First Aid Information
18. Gas Card
19. Maps
20. Radios

HEALTH AND SAFETY

APPENDIX D---NDEP FIELD HEALTH AND SAFETY CHECKLIST

It is suggested that inspectors use this checklist prior to leaving office and conducting sampling activities. Form will be filed with daily activity reports.

Inspection Personnel: _____

_____

Site to be Inspected: _____

Date : _____

Facility Background Information: [ ] Reviewed [ ] Unavailable [ ] Maps

Hazard Assessment:

[ ] Hazardous Substances [ ] Physical Hazards [ ] Biologic Hazards

[ ] Noise [ ] Confined Space (must be avoided)

Describe _____

Protective Measures:

[ ] Steel Toed Boots [ ] Hard Hat [ ] Safety Glasses [ ] Dust Mask

[ ] Tyvek booties and coats & pants or coveralls [ ] Facility Safety Briefing Provided

[ ] Gloves

Other protective measures _____

Vehicle Safety Equipment:

[ ] Spare tire/jack/wrench [ ] Jumper cables [ ] First Aid kit

[ ] Road flares [ ] Fire extinguisher [ ] Flashlight

[ ] Tow strap [ ] Emergency water/snacks [ ] Maps

Hand-Held Radio:

[ ] Available [ ] Unavailable [ ] Not needed

APPENDIX E
NDEP SITE SAFETY/SAMPLING PLAN
PAGE 1 of 1

Team Leader is to complete and sign prior to site entry and review with back-up inspector(s). A sketch map should be developed during site entry to indicate sampling and monitoring locations and notable site features.

NDEP Sampling Team Members Present: _____

_____

Date: _____ Arrival Time On-site: _____ Departure Time: _____

Site Name: _____

Site Location: _____

Site Description: _____

_____

_____

Scope/Objective of Work: _____

_____

_____

_____

PPE Requirements: [ ] Level C [ ] Level D

other _____

_____